

## CHAPTER 4

### Visitor Information Systems



Information is the key to providing a quality visitor experience during the Road rehabilitation period. If Glacier visitors know ahead of time that Going-to-the-Sun Road is under construction, and if they have detailed, accurate information about how, where, when, and to what extent the construction affects their movement on the Road, they can quickly adjust to the inconvenience and still have a world-class vacation experience.

The question now becomes: What information does the visitor need? And how is that information delivered? This chapter provides some answers to these questions, but not all of the answers. Only through reflecting on actual experience as the rehabilitation occurs will the full realm of possibilities be realized. Instead, this chapter is meant to start the discussion and thought process in the park and in the private sector as both start to prepare for the coming rehabilitation period.

### **What Does the Visitor Need to Know?**

In order to actively prepare for and adjust to the impact of the rehabilitation, visitors should be provided the following information:

- The Road is in need of rehabilitation if it is to remain open as a safe and reliable access into and through the park (convince them of the need for the inconvenience).
  - The Road is under construction.
  - Vehicle access across the Road will be maintained to the greatest extent possible.
  - Delays will occur.
  - How long the delays are anticipated to be.
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- What times of day delays will occur.
- When construction delays will end (time of day, days of week, month of year, year).
- Whether the Road is totally closed in certain segments, or only restricted to alternating one-way traffic.
- Which segments of the Road are under repair at the moment and the completion schedule for this and future segments.
- What (if any) areas, attractions, trailheads, etc. are closed due to the construction.
- What transit options are available; what benefit they provide regarding construction delays; the cost, schedule, and locations of stops; where to get tickets; where to park; and whether advanced reservations are required.
- What other visitor options are available in the park.
- The extent of congestion (or lack thereof) in various areas of the park.

This information should be presented with a positive, up-beat tone to convey to the potential visitor that a great vacation experience continues to be available at Glacier, even during rehabilitation of the Road.

## How to Get Information to the Visitor

To best prepare for the impacts of rehabilitation, the visitor needs accurate, detailed, up-to-date information long before arriving at the entrance gate. Information must then continue to flow for as long as the visitor remains in the Glacier area. Following are some means to accomplish this:

- A special, very prominent page on the Glacier website.
- Links to this web page from the main NPS web page, other government web pages, prominent travel information web pages (AAA, GORP, etc.), and local government/chamber/business web pages.
- Attachments sent in response to all e-mailed requests for information about the park, whether or not the request was related to the rehabilitation.
- Public service announcements on local radio stations.
- Enhanced TIS radio system in the park.

- Messages on local cable access channels.
- Variable message signs along the Road.
- Articulate, well-informed, outgoing traffic flaggers.
- Posted messages at visitor centers, West Side Discovery Center, kiosks, campground bulletin boards, and park lodges.
- Handouts at entry stations.

### Delivery System

While general information can be preprinted, by far the most useful information is that made available in real time. Examples of this include the length of traffic delays, the locations of traffic stops, the wait until the next shuttle bus arrives, available parking at Logan Pass, etc.

An information system can be established to electronically display real-time information at kiosks throughout the park and on the website. In time, the system can be expanded to include a portable real-time audio and visual information system that can be carried in the visitor's car, similar to the audio systems currently used in museums and galleries.

The Glacier National Park Intelligent Transportation Systems (ITS) Architecture could be designed and implemented prior to rehabilitation of the Road to bring together information on safety, rehabilitation, interpretation and orientation, transportation, the environment, operations and maintenance, and visitor services. This would meet most of the visitor's needs for information, while providing benefits to the visitor, the park, and economic development in the region. The system could be a private network within the park that links to the NPS and the Internet. The technology to collect and distribute this information exists today. A fiber optic cable that can be unobtrusively laid in the Road may provide the means.

Traditional fiber optic construction would require trenching or boring the entire route, which would have significant impacts on the Road, the park, and the visitor. New technologies are now available which can quickly place multi-strand fiber optic cable less than two inches below the surface in asphalt or concrete. This technique is environmentally sensitive and minimally intrusive for both the Road and its visitors. The high-capacity fiber optic cable is protected from the elements, has good flexibility, and

is easily installed, maintainable, and replaceable at a reasonable cost. This system could be the spine for the collection and dissemination of information along the Road.

A system of this sort could be a tremendous opportunity for Glacier National Park and also serve as a model for other National Parks and Forests. Creating such a system demands careful planning which should begin long before the start of the Road rehabilitation efforts to ensure that the system is up and running when needed.

For the greatest benefit, the system should be designed to provide information before, during, and after the rehabilitation. The first step would be to define all the elements of the system. Some examples would include:

**Safety.** Certain segments of the Road are subject to rockfall and other hazards. Using instrumentation, observation of hazardous areas can, in many cases, be accomplished electronically, making it possible to quickly and clearly transmit safety information to the visitor. As hazards will always exist, the observation and instrumentation should continue after rehabilitation of the Road is complete.

In addition to providing visitor safety information, the system could improve emergency response time by integrating communications on the Road with the park and emergency services communication systems, facilitating direct-connect emergency phones at transit stops, and making phone service to the Logan Pass Visitor Center possible.

**Rehabilitation Effort.** Prior to the start of rehabilitation efforts, traffic volume information can be collected electronically on the Road to provide an overall framework for developing the traffic management strategy. Throughout the rehabilitation, traffic information would continue to be collected to fine-tune the traffic management strategy, with the objective of providing an efficient balance of rehabilitation work and visitor use. The traffic data would also give park personnel information essential to meeting visitor needs, both during and after the Road rehabilitation.

Rehabilitation information could also include locations of rehabilitation sites, current delays, road and weather conditions, and interpretive information on the rehabilitation.

It is likely that several sites will be under rehabilitation at the same time on different segments of the Road. With the fiber optic system in place, each site's traffic control could be coordinated to provide efficient traffic flow on the Road. One traffic control

system currently in use on the Road provides timed traffic signals to control traffic through one-way zones. At times, visitors are stopped when no construction activity is underway and no vehicles from the opposite direction are present. A traffic control system that could determine this situation through vehicle detection and is integrated with other rehabilitation sites would provide a more efficient flow of traffic on the Road. During the rehabilitation efforts, a dispatch and traffic control center could be established to monitor and control traffic throughout the length of the Road and enhance emergency response.

**Interpretation and Orientation.** The opportunities for interpretive and orientation systems are endless, both during and after the rehabilitation effort. Travel information, directions, parking and camping availability, and historical, cultural, and environmental interpretive information could all be provided. As it is envisioned, interpretation could take on a new look using interactive dynamic displays to provide the latest information on the resources of the park, with more elaborate and detailed information than what is possible to include in existing wayside exhibits.

**Transportation.** Transit shuttle stops could be equipped to give real-time information to the visitor with signs that indicate the actual wait until the arrival of the next bus. This is accomplished using GPS units in the transit vehicles and electronic signs at the transit stops. This information gives visitors the necessary means to more effectively plan their time at each stop.

**Environmental Information.** Prior to the rehabilitation effort, base data can be electronically collected and transmitted on environmental information, such as air and water quality, weather conditions, drainage and snow conditions, etc. The information could be used for comparison during and after the rehabilitation, especially for enforcement of environmental constraints placed on the rehabilitation effort. Continual monitoring efforts would help ensure the preservation of the park's natural resources.

**Operations and Maintenance.** In the companion document, *Going-to-the-Sun Road Engineering Study*, strong recommendations are made to collect information on the Road and its features to develop an overall operations and maintenance program. This information could potentially be input by maintenance personnel connected directly from the field.

Fire monitoring and other surveillance could take on a new dimension using video.

Maintaining visitor and vehicle data could provide better means for adjusting the park's operations to best meet the needs of the visitor while protecting the park's integrity, environmental quality, and natural resources. All of this data could be collected, maintained, and distributed within the design of the system.

**Economic Growth Strategies.** Availability of and reservations for camping, tours, excursions, accommodations, and dining could be integrated into the system simply by providing links. Retail sales from local business could also be included. Planning information then becomes accessible to visitors at home, as they travel, and while they are on the Road.

## Summary

The effort to create this vision will require the involvement of all those holding a stake in the future of the Going-to-the-Sun Road, and those who will be impacted by the rehabilitation of the Road. A collaboration between the park, other federal agencies, and local businesses with a common vision would ensure the most cost-effective system that provides the most accurate information and greatest benefit.